

## ABSTRACT OF THE DISCLOSURE

A synchronous motor system in which recovery due to a failed field excitation supply is achieved automatically without resort to, or by minimizing the length of time in asynchronous operation of the motor. A sensing system is deployed to provide a sensed signal that is caused by a failed field excitation supply to vary from a reference value by a predetermined amount. A control unit responds to detected failure by automatically changing a field winding system of the motor over from the failed field excitation supply to a standby field excitation supply. The standby supply can be shared by several synchronous motors.